

form, which commence the process by assuming an elongated shape, then join each other, end to end, and gradually break up into fibres within, so that each row of cells thus attached by their extremities is developed into a bundle of connective fibres." (p. 23.)

Besides this method, M. Morel thinks he has observed in pathological cases the transformation of a similar series of cells into a single fibre, and also the transformation into a single fibre of an elongated series of free nuclei; as to the first of these possibilities, we feel convinced that the observation on which it is based was concerned with the development of yellow elastic fibres, with which the drawing of the specimen well accords (Plate IV, fig. 4); as to the second, we are not able to gain a satisfactory idea of the basis of fact upon which it reposes, or to interpret the drawing of the case (Plate IV, fig. 5).

The erroneous views entertained by M. Morel of the genesis of the connective tissue bundles, necessitates a similar error in connection with fibro-cartilage. "In the formation of fibro-cartilage a portion only of the original formative cells take on the changes above described, whilst the remainder transform themselves into connective and elastic fibres." (p. 29.) This is a view of the development of fibro-cartilage which has no foundation in fact, and which is at once overturned by the practical study of the development of this tissue; the matrix of the fibro-cartilages being homogeneous at first, and subsequently fibrillating, so that these fibres, like those of the white fibrous bundles, represent, in fact, not cells, but transformed intercellular substance.

It is not in our power, nor do we feel inclined at present to follow M. Morel from subject to subject in detail. Did we deem it advisable to do so, we should in many other points be obliged to criticize him for not presenting to the student the best information attainable at the present moment. Indeed, any error in the selection of his views on disputed points becomes especially important, where, as in the present work, the compendious character of the treatise compels the author to admit no other account than that which he determines upon as his own.

Perhaps, however, the most serious fault of the book is its extreme brevity. An account of the minute anatomy of the organ of smell, begun and finished in about half a page, of the mammary gland in six lines, of the Meibomian glands in three, &c. &c., is not complete enough to give anything but the loosest general notions of the matter to a novice, and can be of no possible use to the more advanced student.

In concluding, it is only just to bestow the praise which is deserved upon the American translator, who has moreover added a number of valuable notes, and to commend the general character of the lithographic plates, twenty-eight in number, with which the book is illustrated.

J. J. W.

ART. XXIV.—*Recherches sur la Substitution Graisseuse du Rein.* Par M. le Docteur ERNEST GODARD, Ancien Interne des Hôpitaux de Paris, Membre de la Société de Biologie, etc. Paris, Victor Masson, 1859. 8vo. pp. 31.

M. GODARD occupies the first few pages of his monograph with citations from several authors, to the effect that fat may be deposited in the tissue of various organs, a fact which we believe is not disputed. He next impresses upon the reader the view that fatty infiltration or deposition, is quite a different thing from fatty degeneration, or transformation—a task which he might well have spared himself, as we are not aware that any opposition exists among pathologists to this very obvious and reasonable doctrine.

In the next place, M. Godard asserts that the kidney is, after the muscles, the organ most liable to undergo fatty degeneration, or substitution. We think this opinion admits of being questioned; nevertheless, no doubt can exist that fat is frequently substituted for the normal tissue of the kidney. Several cases are cited by M. Godard from the writings of Morgagni, Rayer, Cruveilhier, Petrusquin, and others, and he concludes that

"The cases which exist in science, and which I have collected, appear to me to show that fatty substitution of the kidney is essentially characterized by the deposit of a variable quantity of fat, either in the parenchyma of the gland, or at its periphery, but always within the capsule or in the hilum of the organ. Then the fat penetrates between the mucous membrane and the pyramids, and leads little by little to the atrophy of the kidney."

After giving the details of an autopsy which came under his own notice, and quoting a case from Baader, and one reported by Rayer, M. Godard says:—

"The two preceding cases afford some information relative to the condition of the patients, in which, after death, fatty substitution of the kidneys was discovered.

"I shall not endeavour, whilst recalling the principal facts which they present, to trace the history of this disease; in order to do this, I am of the opinion that more complete, and more voluminous testimony is necessary. I will insist only on the difference existing between the infiltration of fatty granulations and globules in the epithelium of the kidney—an occurrence which is often met with in albuminous nephritis—and fatty substitution of the same organ, which results from, and coincides very frequently with, the presence of one or many calculi in the ureter, or pelvis of the kidney.

"I think that these two diseases are distinct, and that the one cannot be transformed into the other.

"Whilst the existence of the first is made known by the occurrence of easily recognized conditions (albumen in the urine, ascites, and anasarca), the other supervenes insidiously, and may lead to the more or less complete destruction of one of the kidneys, without exciting suspicion of its presence. The case observed by M. Bricheteau shows that if both kidneys are affected, the secretion gradually diminishes, then stops for a certain number of days, and the patient dies without presenting any of the symptoms which are the ordinary consequences of the sudden suppression of the urinary excretion."

This passage closes M. Godard's memoir—a memoir in which we do not find an original idea, and which belongs to a class unhappily becoming very numerous, especially in France.

The essay is illustrated with one steel plate engraving, representing fat globules, adipose vesicles, and several tissues affected with fatty substitution, which, like the text, is made up of borrowed material—Bowman, Johnson, and Robin, being put under contribution for the purpose. There are also two lithographs, showing the appearance of the kidneys, in the case of which M. Godard had the opportunity of witnessing the autopsy.

W. A. H.

ART. XXV.—*Anatomy of the Arteries of the Human Body, descriptive and surgical, with the Descriptive Anatomy of the Heart.* By JOHN HATCH POWER, M. D., etc. With Illustrations, by B. WILLS RICHARDSON, F. R. C. S. I., etc. 12mo., pp. 374: Dublin, FANNIN & CO., 1860.

ALTHOUGH specially designed for the use of students, and of practitioners who have not frequent opportunities for dissection, this excellent little volume may be consulted with advantage by any one who has occasion to investigate matters relating to its subject. The descriptions contained in it are extremely clear, concise, and accurate; equal perhaps to those of any of the more imposing treatises on anatomy. They have evidently been prepared by one who not only knew what to say, but how to say it, having both a natural facility and an acquired skill in teaching.

Dr. Power's production is a very much modified edition of a book bearing the same title, by the late Dr. Flood, of Dublin. The latter work, which enjoyed a good share of popularity in its day, is now out of print; it has been partly curtailed and partly amplified, and its arrangement slightly changed, in preparing it for reissue. We are somewhat inclined to regret the omission of the introductory sketch of the physiology and comparative anatomy of the circulatory